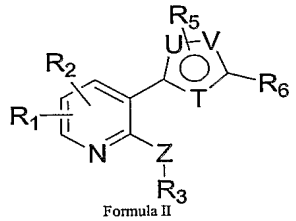
Claims

What is claimed is:

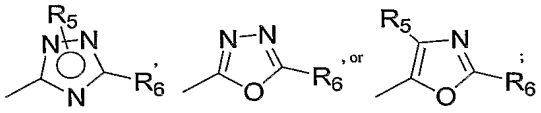
1. A compound having Formula II:



Formula II

or pharmaceutically acceptable salts, stereoisomers, hydrates or pro-drugs thereof, wherein,

the ring formed by T, U, V is



Z is O, S, nitro, or NR_4;

R_1, R_2, or R_5 each independently is:

1) hydrogen, hydroxyl, halo, nitro, or cyano;

2) C_1-C_8 alkyl;

3) C_2-C_8 alkenyl;

4) C_2-C_8 alkynyl;

5) C_1-C_8 alkoxy;

6) C_3-C_8 cycloalkyl or heterocyclyl;

7) C_4-C_8 cycloalkylalkyl or heterocyclylalkyl;

8) C_3-C_{10} aryl;

9) C_5-C_{10} aralkyl;

10) C_6-C_{10} aryloxy;

11) NH_2, NHR_7, or NR_7R_7; or

12) $-SO_2R_7$,

wherein R_7 is independently H, hydroxyl, halo, C_1-C_6 alkyl optionally substituted with at least one R_{10}, C_1-C_6 alkoxy optionally substituted with at least one R_{10}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{10}, C_4-C_8 heterocycloalkyl optionally substituted with at least one R_{10}, C_3-C_{10} aryl optionally substituted with at least one R_{10}, NH_2, NHR_{10}, $NR_{10}R_{10}$, or SO_2R_{10}, wherein R_{10} is independently halo, cyano, nitro, C_1-C_4

alkyl, C_1-C_4 alkoxy, or NH_2; optionally, R_1 and R_2 taken together form a ring structure including cycloalkyl, heterocyclyl, or aryl ring;

R_3 is:

1) hydrogen;

2) C_1-C_8 alkyl;

3) C_2-C_8 alkenyl;

4) C_2-C_8 alkynyl;

5) C_1-C_8 alkoxy;

6) C_3-C_{10} cycloalkyl or heterocyclyl;

7) C_4-C_{10} cycloalkylalkyl or heterocyclylalkyl;

8) C_3-C_{10} aryl;

9) C_4-C_{10} aralkyl;

10) carbonyl; or

11) $-SO_2R_8$, $-CO_2R_8$, $-SR_8$, or $-SOR_8$;

wherein R_8 is independently H, halo, cyano, nitro, C_1-C_4 alkyl optionally substituted with at least one R_{11}, C_1-C_4 alkoxy optionally substituted with at least one R_{11}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{11}, C_3-C_8 heterocyclyl optionally substituted with at least one R_{11}, C_6-C_{10} aryl optionally substituted with at least one R_{11}, C_6-C_{10} aralkyl optionally substituted with at least one R_{11}, NH_2, NHR_{11}, $NR_{11}R_{11}$, or SO_2R_{11}, wherein R_{11} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_6-C_{10} aryl, C_3-C_8 aralkyl, C_3-C_8 heterocyclyl, or NH_2,

R_4 is:

1) hydrogen;

2) C_1-C_8 alkyl;

3) C_2-C_8 alkenyl;

4) C_2-C_8 alkynyl;

5) C_3-C_8 cycloalkyl or heterocyclyl;

6) C_4-C_8 cycloalkylalkyl or heterocyclylalkyl;

7) C_3-C_{10} aryl;

8) C_5-C_{10} aralkyl;

9) carbonyl; or

10) $-SO_2R_{12}$, or $-SOR_{12}$;

wherein R_{12} is independently H, halo, cyano, nitro, C_1-C_6 alkyl optionally substituted with at least one R_{13}, C_1-C_4 alkoxy optionally substituted with at least one R_{13},

C_3-C_8 cycloalkyl optionally substituted with at least one R_{13}, C_2-C_8 heterocyclyl optionally substituted with at least one R_{13}, C_3-C_{10} aryl optionally substituted with at least one R_{13}, NH_2, NHR_{13}, $NR_{13}R_{13}$, or SO_2R_{13}, wherein R_{13} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_3-C_9 aryl, C_3-C_8 heterocyclylalkyl, or NH_2; optionally, R_3 and R_4 are taken together to form a C_4-C_6 heterocyclyl optionally substituted with R_{13}, or aryl; and

R_6 is:

1) C_1-C_8 alkyl;
2) C_2-C_8 alkenyl;
3) C_2-C_8 alkynyl;
4) C_1-C_8 alkoxy;
5) C_3-C_{10} cycloalkyl or heterocyclyl;
6) C_4-C_{10} cycloalkylalkyl or heterocyclylalkyl;
7) C_4-C_{10} aryl;
8) C_5-C_{10} aralkyl; or
9) NH_2, NHR_9 or NR_9R_9,

wherein R_9 is independently hydroxyl, halo, nitro, C_1-C_6 alkyl optionally substituted with at least one R_{14}, C_2-C_6 alkynyl optionally substituted with at least one R_{14}, C_1-C_6 alkoxy optionally substituted with at least one R_{14}, C_3-C_{10} cycloalkyl optionally substituted with at least one R_{14}, C_2-C_8 heterocyclyl optionally substituted with at least one R_{14}, C_4-C_8 cycloalkylalkyl optionally substituted with R_{14}, heterocyclylalkyl optionally substituted with R_{14}, C_4-C_{10} aryl optionally substituted with at least one R_{14}, C_5-C_{10} aralkyl optionally substituted with at least one R_{14}, -NH_2, -NHR_{14}, -$NR_{14}R_{14}$, or -SO_2-R_{14}, wherein R_{14} is independently halo, cyano, nitro, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_4-C_9 cycloalkyl, C_4-C_9 heterocycloalkyl, C_4-C_{10} aryl, -SO_2(C_6-C_{10} aryl), -NH_2, -NH[(C_1-C_4) alkyl], -N[(C_1-C_4) alkyl]$_2$, -NH(C_5-C_8 heterocyclylalkyl), -NH(C_6-C_8 aryl), or -NH(C_6-C_8 heterocyclyl).

2. The compounds according to claim 1, wherein Z is O or NH.

3. The compounds according to claim 1, wherein R_1, R_2, or R_5 is substituted with R_7, wherein R_7 is independently hydroxyl, halo, C_1-C_6 alkyl optionally substituted with at least one R_{10}, C_1-C_6 alkoxy optionally substituted with at least one R_{10}, C_3-C_8 cycloalkyl

optionally substituted with at least one R_{10}, C_4-C_8 heterocycloalkyl optionally substituted with at least one R_{10}, C_3-C_{10} aryl optionally substituted with at least one R_{10}, NH_2, NHR_{10}, $NR_{10}R_{10}$, or SO_2R_{10}, wherein R_{10} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, or NH_2.

4. The compounds according to claim 1, wherein R_1 and R_2 taken together form a ring structure including cycloalkyl, heterocyclyl or aryl rings.

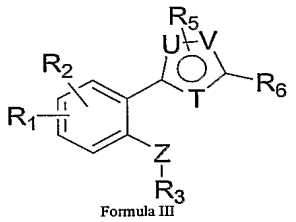
5. The compound according to claim 1, wherein R_3 is substituted with R_8 wherein R_8 is independently halo, cyano, nitro, C_1-C_4 alkyl optionally substituted with at least one R_{11}, C_1-C_4 alkoxy optionally substituted with at least one R_{11}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{11}, C_3-C_8 heterocyclyl optionally substituted with at least one R_{11}, C_6-C_{10} aryl optionally substituted with at least one R_{11}, C_6-C_{10} aralkyl optionally substituted with at least one R_{11}, NH_2, NHR_{11}, $NR_{11}R_{11}$, or SO_2R_{11}, wherein R_{11} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_6-C_{10} aryl, C_3-C_8 aralkyl, C_3-C_8 heterocyclyl, or NH_2.

6. The compound according to claim 1, wherein R_4 is substituted with R_{12} wherein R_{12} is independently halo, cyano, nitro, C_1-C_6 alkyl optionally substituted with at least one R_{13}, C_1-C_4 alkoxy optionally substituted with at least one R_{13}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{13}, C_2-C_8 heterocyclyl optionally substituted with at least one R_{13}, C_3-C_{10} aryl optionally substituted with at least one R_{13}, NH_2, NHR_{13}, $NR_{13}R_{13}$, or SO_2R_{13}, wherein R_{13} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_3-C_9 aryl, C_3-C_8 heterocyclylalkyl, or NH_2.

7. The compound according to claim 1, wherein R_6 is substituted with R_9 wherein R_9 is independently hydroxyl, halo, nitro, C_1-C_6 alkyl optionally substituted with at least one R_{14}, C_2-C_6 alkynyl optionally substituted with at least one R_{14}, C_1-C_6 alkoxy optionally substituted with at least one R_{14}, C_3-C_{10} cycloalkyl optionally substituted with at least one R_{14}, C_2-C_8 heterocyclyl optionally substituted with at least one R_{14}, C_4-C_8 cycloalkylalkyl optionally substituted with R_{14}, heterocyclylalkyl optionally substituted with R_{14}, C_4-C_{10} aryl optionally substituted with at least one R_{14}, C_5-C_{10} aralkyl optionally substituted with at least one R_{14}, $-NH_2$, $-NHR_{14}$, $-NR_{14}R_{14}$, or $-SO_2-R_{14}$, wherein R_{14} is independently halo, cyano, nitro, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_4-C_9 cycloalkyl, C_4-C_9

heterocycloalkyl, C_4-C_{10} aryl, -SO_2(C_6-C_{10} aryl), -NH_2, -NH[(C_1-C_4) alkyl], -N[(C_1-C_4) alkyl]$_2$, -NH(C_5-C_8 heterocyclylalkyl), -NH(C_6-C_8 aryl), or -NH(C_6-C_8 heterocyclyl).

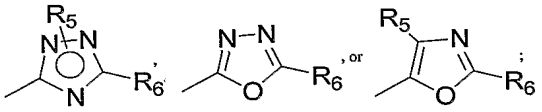
8. A compound of Formula III:



Formula III

wherein,

the ring formed by T, U, V is



Z is O, S, nitro, or NR_4;

R_1, R_2, or R_5 each independently is:

1) hydrogen, hydroxyl, halo, nitro, or cyano;
2) C_1-C_8 alkyl;
3) C_2-C_8 alkenyl;
4) C_2-C_8 alkynyl;
5) C_1-C_8 alkoxy;
6) C_3-C_8 cycloalkyl or heterocyclyl;
7) C_4-C_8 cycloalkylalkyl or heterocyclylalkyl;
8) C_3-C_{10} aryl;
9) C_5-C_{10} aralkyl;
10) C_6-C_{10} aryloxy;
11) NH_2, NHR_7, or NR_7R_7; or
12) -SO_2R_7,

wherein R_7 is independently H, hydroxyl, halo, C_1-C_6 alkyl optionally substituted with at least one R_{10}, C_1-C_6 alkoxy optionally substituted with at least one R_{10}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{10}, C_4-C_8 heterocycloalkyl optionally substituted with at least one R_{10}, C_3-C_{10} aryl optionally substituted with at least one R_{10}, NH_2, NHR_{10}, $NR_{10}R_{10}$, or SO_2R_{10}, wherein R_{10} is independently halo, cyano, nitro, C_1-C_4

alkyl, C_1-C_4 alkoxy, or NH_2; optionally, R_1 and R_2 taken together form a ring structure including cycloalkyl, heterocyclyl, or aryl ring;

R_3 is:

1) hydrogen;

2) C_1-C_8 alkyl;

3) C_2-C_8 alkenyl;

4) C_2-C_8 alkynyl;

5) C_1-C_8 alkoxy;

6) C_3-C_{10} cycloalkyl or heterocyclyl;

7) C_4-C_{10} cycloalkylalkyl or heterocyclylalkyl;

8) C_3-C_{10} aryl;

9) C_4-C_{10} aralkyl;

10) carbonyl; or

11) $-SO_2R_8$, $-CO_2R_8$, $-SR_8$, or $-SOR_8$;

wherein R_8 is independently H, halo, cyano, nitro, C_1-C_4 alkyl optionally substituted with at least one R_{11}, C_1-C_4 alkoxy optionally substituted with at least one R_{11}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{11}, C_3-C_8 heterocyclyl optionally substituted with at least one R_{11}, C_6-C_{10} aryl optionally substituted with at least one R_{11}, C_6-C_{10} aralkyl optionally substituted with at least one R_{11}, NH_2, NHR_{11}, $NR_{11}R_{11}$, or SO_2R_{11}, wherein R_{11} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_6-C_{10} aryl, C_3-C_8 aralkyl, C_3-C_8 heterocyclyl, or NH_2,

R_4 is:

1) hydrogen;

2) C_1-C_8 alkyl;

3) C_2-C_8 alkenyl;

4) C_2-C_8 alkynyl;

5) C_3-C_8 cycloalkyl or heterocyclyl;

6) C_4-C_8 cycloalkylalkyl or heterocyclylalkyl;

7) C_3-C_{10} aryl;

8) C_5-C_{10} aralkyl;

9) carbonyl; or

10) $-SO_2R_{12}$, or $-SOR_{12}$;

wherein R_{12} is independently H, halo, cyano, nitro, C_1-C_6 alkyl optionally substituted with at least one R_{13}, C_1-C_4 alkoxy optionally substituted with at least one R_{13},

C_3-C_8 cycloalkyl optionally substituted with at least one R_{13}, C_2-C_8 heterocyclyl optionally substituted with at least one R_{13}, C_3-C_{10} aryl optionally substituted with at least one R_{13}, NH_2, NHR_{13}, $NR_{13}R_{13}$, or SO_2R_{13}, wherein R_{13} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_3-C_9 aryl, C_3-C_8 heterocyclylalkyl, or NH_2; optionally, R_3 and R_4 are taken together to form a C_4-C_6 heterocyclyl optionally substituted with R_{13}, or aryl; and

R_6 is:

1) C_1-C_8 alkyl;
2) C_2-C_8 alkenyl;
3) C_2-C_8 alkynyl;
4) C_1-C_8 alkoxy;
5) C_3-C_{10} cycloalkyl or heterocyclyl;
6) C_4-C_{10} cycloalkylalkyl or heterocyclylalkyl;
7) C_4-C_{10} aryl;
8) C_5-C_{10} aralkyl; or
9) NH_2, NHR_9 or NR_9R_9,

wherein R_9 is independently hydroxyl, halo, nitro, C_1-C_6 alkyl optionally substituted with at least one R_{14}, C_2-C_6 alkynyl optionally substituted with at least one R_{14}, C_1-C_6 alkoxy optionally substituted with at least one R_{14}, C_3-C_{10} cycloalkyl optionally substituted with at least one R_{14}, C_2-C_8 heterocyclyl optionally substituted with at least one R_{14}, C_4-C_8 cycloalkylalkyl optionally substituted with R_{14}, heterocyclylalkyl optionally substituted with R_{14}, C_4-C_{10} aryl optionally substituted with at least one R_{14}, C_5-C_{10} aralkyl optionally substituted with at least one R_{14}, -NH_2, -NHR_{14}, -$NR_{14}R_{14}$, or -SO_2-R_{14}, wherein R_{14} is independently halo, cyano, nitro, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_4-C_9 cycloalkyl, C_4-C_9 heterocycloalkyl, C_4-C_{10} aryl, -SO_2(C_6-C_{10} aryl), -NH_2, -NH[(C_1-C_4) alkyl], -N[(C_1-C_4) alkyl]$_2$, -NH(C_5-C_8 heterocyclylalkyl), -NH(C_6-C_8 aryl), or -NH(C_6-C_8 heterocyclyl).

9. The compound according to claim 8, wherein Z is O or NR_4.

10. The compound according to claim 8, wherein R_1, R_2, or R_5 is substituted with R_7 wherein R_7 is independently hydroxyl, halo, C_1-C_6 alkyl optionally substituted with at least one R_{10}, C_1-C_6 alkoxy optionally substituted with at least one R_{10}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{10}, C_4-C_8 heterocycloalkyl optionally substituted

with at least one R_{10}, C_3-C_{10} aryl optionally substituted with at least one R_{10}, NH_2, NHR_{10}, $NR_{10}R_{10}$, or SO_2R_{10}, wherein R_{10} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, or NH_2.

11. The compound according to claim 8, wherein when taken together R_1 and R_2 form a ring structure including cycloalkyl, heterocyclyl, or aryl.

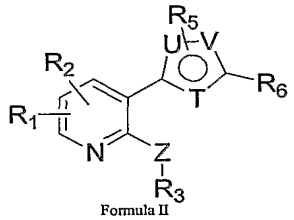
12. The compound according to claim 8, wherein R_3 is substituted with R_8 wherein R_8 is independently halo, cyano, nitro, C_1-C_4 alkyl optionally substituted with at least one R_{11}, C_1-C_4 alkoxy optionally substituted with at least one R_{11}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{11}, C_3-C_8 heterocyclyl optionally substituted with at least one R_{11}, C_6-C_{10} aryl optionally substituted with at least one R_{11}, C_6-C_{10} aralkyl optionally substituted with at least one R_{11}, NH_2, NHR_{11}, $NR_{11}R_{11}$, or SO_2R_{11}, wherein R_{11} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_6-C_{10} aryl, C_3-C_8 aralkyl, C_3-C_8 heterocyclyl, or NH_2.

13. The compound according to claim 8, wherein R_4 is substituted with R_{12} wherein R_{12} is independently halo, cyano, nitro, C_1-C_6 alkyl optionally substituted with at least one R_{13}, C_1-C_4 alkoxy optionally substituted with at least one R_{13}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{13}, C_2-C_8 heterocyclyl optionally substituted with at least one R_{13}, C_3-C_{10} aryl optionally substituted with at least one R_{13}, NH_2, NHR_{13}, $NR_{13}R_{13}$, or SO_2R_{13}, wherein R_{13} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_3-C_9 aryl, C_3-C_8 heterocyclylalkyl, or NH_2.

14. The compound according to claim 8, wherein R_6 is substituted with R_9 wherein R_9 is independently hydroxyl, halo, nitro, C_1-C_6 alkyl optionally substituted with at least one R_{14}, C_2-C_6 alkynyl optionally substituted with at least one R_{14}, C_1-C_6 alkoxy optionally substituted with at least one R_{14}, C_3-C_{10} cycloalkyl optionally substituted with at least one R_{14}, C_2-C_8 heterocyclyl optionally substituted with at least one R_{14}, C_4-C_8 cycloalkylalkyl optionally substituted with R_{14}, heterocyclylalkyl optionally substituted with R_{14}, C_4-C_{10} aryl optionally substituted with at least one R_{14}, C_5-C_{10} aralkyl optionally substituted with at least one R_{14}, $-NH_2$, $-NHR_{14}$, $-NR_{14}R_{14}$, or $-SO_2-R_{14}$, wherein R_{14} is independently halo, cyano, nitro, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_4-C_9 cycloalkyl, C_4-C_9

heterocycloalkyl, C_4-C_{10} aryl, -SO_2(C_6-C_{10} aryl), -NH_2, -NH[(C_1-C_4) alkyl], -N[(C_1-C_4) alkyl]$_2$, -NH(C_5-C_8 heterocyclylalkyl), -NH(C_6-C_8 aryl), or -NH(C_6-C_8 heterocyclyl).

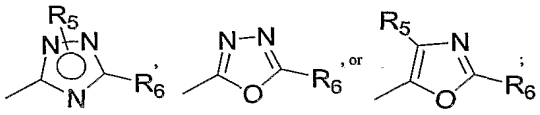
15. A method for treating cancer comprising administering a therapeutically effective amount of a compound of Formula II to a subject in need of such treatment, wherein the compound of Formula II has the formula:



Formula II

or pharmaceutically acceptable salts, stereoisomers, hydrates or pro-drugs thereof, wherein,

the ring formed by T, U, V is



Z is O, S, nitro, or NR_4;

R_1, R_2, or R_5 each independently is:

1) hydrogen, hydroxyl, halo, nitro, or cyano;
2) C_1-C_6 alkyl;
3) C_2-C_6 alkenyl;
4) C_2-C_6 alkynyl;
5) C_1-C_6 alkoxy;
6) C_3-C_8 cycloalkyl or heterocyclyl;
7) C_4-C_8 cycloalkylalkyl or heterocyclylalkyl;
8) C_4-C_{10} aryl;
9) C_5-C_{10} aralkyl;
10) C_6-C_{10} aryloxy;
11) NH_2, NHR_7, or NR_7R_7; or
12) -SO_2R_7,

wherein R_7 is independently H, hydroxyl, halo, C_1-C_4 alkyl optionally substituted with at least one R_{10}, C_1-C_4 alkoxy optionally substituted with at least one R_{10}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{10}, C_4-C_8 heterocycloalkyl optionally

substituted with at least one R_{10}, C_6-C_{10} aryl optionally substituted with at least one R_{10}, NH_2, NHR_{10}, $NR_{10}R_{10}$, or SO_2R_{10}, wherein R_{10} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, or NH_2, wherein when taken together R_1 and R_2 form a ring structure including heterocyclyl or aryl rings;

R_3 is:

1) hydrogen;
2) C_1-C_6 alkyl;
3) C_2-C_6 alkenyl;
4) C_2-C_6 alkynyl;
5) C_1-C_6 alkoxy;
6) C_3-C_{10} cycloalkyl or heterocyclyl;
7) C_4-C_{10} cycloalkylalkyl or heterocyclylalkyl;
8) C_4-C_{10} aryl;
9) C_4-C_{10} aralkyl;
10) carbonyl; or
11) $-SO_2R_8$, $-CO_2R_8$, $-SR_8$, or $-SOR_8$;

wherein R_8 is independently H, halo, cyano, nitro, C_1-C_4 alkyl optionally substituted with at least one R_{11}, C_1-C_4 alkoxy optionally substituted with at least one R_{11}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{11}, C_3-C_8 heterocyclyl optionally substituted with at least one R_{11}, C_6-C_{10} aryl optionally substituted with at least one R_{11}, C_6-C_{10} aralkyl optionally substituted with at least one R_{11}, NH_2, NHR_{11}, $NR_{11}R_{11}$, or SO_2R_{11}, wherein R_{11} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_6-C_{10} aryl, C_3-C_8 aralkyl, C_3-C_8 heterocyclyl, or NH_2,

R_4 is:

1) hydrogen;
2) C_1-C_6 alkyl;
3) C_2-C_6 alkenyl;
4) C_2-C_6 alkynyl;
5) C_3-C_8 cycloalkyl or heterocyclyl;
6) C_4-C_8 cycloalkylalkyl or heterocyclylalkyl;
7) C_4-C_{10} aryl;
8) C_5-C_{10} aralkyl;
9) carbonyl; or
10) $-SO_2R_{12}$, or $-SOR_{12}$;

wherein R_{12} is independently H, halo, cyano, nitro, C_1-C_6 alkyl optionally substituted with at least one R_{13}, C_1-C_4 alkoxy optionally substituted with at least one R_{13}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{13}, C_2-C_8 heterocyclyl optionally substituted with at least one R_{13}, C_6-C_{10} aryl optionally substituted with at least one R_{13}, NH_2, NHR_{13}, $NR_{13}R_{13}$, or SO_2R_{13}, wherein R_{13} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_3-C_9 aryl, C_3-C_8 heterocyclylalkyl, or NH_2; and

R_6 is:

1) C_1-C_6 alkyl;
2) C_2-C_6 alkenyl;
3) C_2-C_6 alkynyl;
4) C_1-C_6 alkoxy;
5) C_3-C_8 cycloalkyl or heterocyclyl;
6) C_4-C_8 cycloalkylalkyl or heterocyclylalkyl;
7) C_4-C_{10} aryl;
8) C_5-C_{10} aralkyl; or
9) $-NH_2$, $-NHR_9$, or $-NR_9R_9$,

wherein R_9 is independently hydroxyl, halo, nitro, C_1-C_4 alkyl optionally substituted with at least one R_{14}, C_2-C_4 alkynyl optionally substituted with at least one R_{14}, C_1-C_4 alkoxy optionally substituted with at least one R_{14}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{14}, C_2-C_8 heterocyclyl optionally substituted with at least one R_{14}, C_6-C_{10} aryl optionally substituted with at least one R_{14}, C_5-C_{10} aralkyl optionally substituted with at least one R_{14}, $-NH_2$, $-NHR_{14}$, $-NR_{14}R_{14}$, or $-SO_2$-R_{14}, wherein R_{14} is independently halo, cyano, nitro, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_4-C_9 cycloalkyl, C_6-C_{10} aryl, C_4-C_9 heterocycloalkyl, $-SO_2(C_6$-C_{10} aryl), NH_2, $-NH[(C_1$-$C_4)$ alkyl], $-N[(C_1$-$C_4)$ alkyl]$_2$, $-NH(C_5$-C_9 heterocyclylalkyl), $-NH(C6$-C_8 aryl), or $-NH(C_6$-C_8 heterocyclyl) or a pharmaceutically acceptable salt, hydrate or pro-drug thereof, in combination with a pharmaceutically acceptable carrier.

16. The method according to claim 15, wherein Z is O or NH.

17. The method according to claim 15, wherein R_1, R_2, or R_5 is substituted with R_7 wherein R_7 is independently hydroxyl, halo, C_1-C_6 alkyl optionally substituted with at least one R_{10}, C_1-C_6 alkoxy optionally substituted with at least one R_{10}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{10}, C_4-C_8 heterocycloalkyl optionally substituted

with at least one R_{10}, C_3-C_{10} aryl optionally substituted with at least one R_{10}, NH_2, NHR_{10}, $NR_{10}R_{10}$, or SO_2R_{10}, wherein R_{10} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, or NH_2.

18. The method according to claim 15, wherein R_1 and R_2 taken together form a ring structure including cycloalkyl, heterocyclyl, or aryl.

19. The method according to claim 15, wherein R_3 is substituted with R_8 wherein R_8 is independently halo, cyano, nitro, C_1-C_4 alkyl optionally substituted with at least one R_{11}, C_1-C_4 alkoxy optionally substituted with at least one R_{11}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{11}, C_3-C_8 heterocyclyl optionally substituted with at least one R_{11}, C_6-C_{10} aryl optionally substituted with at least one R_{11}, C_6-C_{10} aralkyl optionally substituted with at least one R_{11}, NH_2, NHR_{11}, $NR_{11}R_{11}$, or SO_2R_{11}, wherein R_{11} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_6-C_{10} aryl, C_3-C_8 aralkyl, C_3-C_8 heterocyclyl, or NH_2.

20. The method according to claim 15, wherein R_4 is substituted with R_{12} wherein R_{12} is independently halo, cyano, nitro, C_1-C_6 alkyl optionally substituted with at least one R_{13}, C_1-C_4 alkoxy optionally substituted with at least one R_{13}, C_3-C_8 cycloalkyl optionally substituted with at least one R_{13}, C_2-C_8 heterocyclyl optionally substituted with at least one R_{13}, C_3-C_{10} aryl optionally substituted with at least one R_{13}, NH_2, NHR_{13}, $NR_{13}R_{13}$, or SO_2R_{13}, wherein R_{13} is independently halo, cyano, nitro, C_1-C_4 alkyl, C_1-C_4 alkoxy, C_3-C_9 aryl, C_3-C_8 heterocyclylalkyl, or NH_2.

21. The method according to claim 15, wherein R_6 is substituted with R_9 wherein R_9 is independently hydroxyl, halo, nitro, C_1-C_6 alkyl optionally substituted with at least one R_{14}, C_2-C_6 alkynyl optionally substituted with at least one R_{14}, C_1-C_6 alkoxy optionally substituted with at least one R_{14}, C_3-C_{10} cycloalkyl optionally substituted with at least one R_{14}, C_2-C_8 heterocyclyl optionally substituted with at least one R_{14}, C_4-C_8 cycloalkylalkyl optionally substituted with R_{14}, heterocyclylalkyl optionally substituted with R_{14}, C_4-C_{10} aryl optionally substituted with at least one R_{14}, C_5-C_{10} aralkyl optionally substituted with at least one R_{14}, -NH_2, -NHR_{14}, -$NR_{14}R_{14}$, or -SO_2-R_{14}, wherein R_{14} is independently halo, cyano, nitro, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_4-C_9 cycloalkyl, C_4-C_9

heterocycloalkyl, C_4-C_{10} aryl, -SO_2(C_6-C_{10} aryl), -NH_2, -NH[(C_1-C_4) alkyl], -N[(C_1-C_4) alkyl]$_2$, -NH(C_5-C_8 heterocyclylalkyl), -NH(C_6-C_8 aryl), or -NH(C_6-C_8 heterocyclyl).

22. The method according to claim 15, wherein the dosage form is a tablet, caplet, troche, lozenge, dispersion, suspension, suppository, solution, capsule, or patch.

23. The method according to claim 15, wherein the compound is administered in about 0.001 mg/kg to about 100 mg/kg.

24. The method according to claim 15, wherein the compound is administered by oral administration.